CHLORIDE
POWER PROTECTION

Distributed by
POWERCOM
800-288-9807

Desk POWER

UPS 300VA
500VA
650VA

230V / 120V
RS232 / USB

o Uninterruptible Power System

Operating Manual

CHLORIDE
POWER PROTECTION

o Uninterruptible Power System

Desk P O W E R 3 0 0
Desk P O W E R 5 0 0
Desk P O W E R 6 5 0

Operating Manual

All rights, including rights of translation, reproduction by printing, copying or similar methods, even of parts, are reserved.
Offenders will be liable for damages.
All rights, including rights created by patent grant of registration of utility model or design, are reserved.
Delivery subject to availability. Right of technical modification reserved.

Safety Instructions 7

Explanation of Symbols 8

1. Introduction 9

2. Unpacking the Unit & Contents 10
2.1 Unpacking the Unit 10
2.2 Package Contents 11

3. Installation 11

4. The Unit 14
4.1 Front Panel 14
4.1.1 Elements 14
4.1.2 Funcitonality 15
4.2 Rear Panel 15
4.2.1 230V Version 15
4.2.1.1 RS232 15
4.2.1.2 USB 16
4.2.2 120V Version 16
4.2.2.1 RS232 16
4.2.2.2 USB 17

5. Battery Test 18

6. Interfaces 19

7. Maintenance 20
7.1 Battery Replacement 20
7.2 Storage 22
7.3 Cleaning 22

8. Troubleshooting 22

9. Technical Data 23

10. Battery Back-up times 24

11. Registration Form 25

12. Chloride Address 27

Safety Instructions

CAUTION

Please read the following information carefully and save this manual for future reference! Disregard of these safety notes may endanger life or health, as well as the function of the equipment and the safety of your data.

- Whenever the on/off switch is on, there may be dangerous voltage present at the outlets. This is because the battery supplies power even if the unit is not plugged into the wall outlet. The unit contains dangerous voltage.
- If the equipment is moved from a cold room to the operating room, please make sure that the equipment is absolutely dry before it is put into service.
- The equipment must be installed in an environment free from excessive dust and with enough air flow. Do not expose equipment to moisture, excessive heat or direct sunlight.
- This equipment has a safety-tested power cable and may only be connected to a properly grounded plug-socket.
- The power supply cord is intended to serve as the disconnection device. The outlet-socket must be near the equipment and must be easily accessible.
- No data transmission lines should be connected or disconnected during a thunderstorm.
- Make sure no objects (e.g. pins, necklaces, paper lips, etc) get inside the device.
- Do not remove or unplug the input cord when the UPS is turned on. This action removes the safety ground from the UPS and the connected load.
- The sum of the leakage current (protection conductor current) of the UPS and the connected devices must not exceed 3.5mA for the 230V series.
- The sum of the leakage current (protection conductor current) of the UPS and the connected devices must not exceed 0.75mA for the 120V series.

WARNING: There is a high risk of electric shock from the battery and a high short-circuit potential. Remove all watches, rings and other metal objects and use only insulated tools when replacing the battery.

WARNING: Do not throw the battery into a fire; it can explode.

WARNING: Do not open the battery. The electrolyte can be dangerous to the eyes and skin when spilled. It may be toxic.

EC /UL/CSA Conformity Declaration

· The Chloride Desk Power 230V UPS complies with the regulations of the following European guidelines:
73/23/EEC Council guideline for EC countries concerning electrical apparatus within certain voltage tolerances, modified by the guideline RL 93/68/EEC of the Council.
89/336/EEC Council guideline for EC countries concerning electromagnetic compatibility, modified by the guidelines RL 91/263/EEC, 92/31/EEC and 93/68/EEC of the Council.
· The Desk Power 120V complies with the regulations of the following American & Canadian guidelines:
UL US Council guideline concerning electrical apparatus within certain voltage tolerances, modified by guideline UL1778.
CSA Council guideline for Canada concerning electrical apparatus within certain voltage tolerances,modified by guideline CSA C22.2 No.107.1.

Symbols

The meanings of the symbols used in this manual are as follows:

Pay particular attention to texts marked with this symbol. Failure to observe this warning may endangers life, destroy systems, or lead to loss of data.

This symbol is followed by supplementary information, remarks and tips.

1. Introduction

The Chloride DESK POWER series is based on the off-line principle. This means that the equipment connected to the unit is powered by the mains after passing through diverse filters. This way, disturbances in the power mains are reduced, thereby improving the operational safety of the protected equipment (PC, server systems, extended systems, etc.). In the event of a mains failure, the built-in battery assumes the uninterrupted supply of energy.

The UPS indicates via acoustic (buzzer) and visual (LED) alarms that a mains failure has occurred.

The UPS has an auxiliary outlet with a filter for surges, electrical noise and transient voltage for non-critical loads, which are not battery powered.

This UPS is equipped with a protection device for voice and data lines. It protects fax, modem or local network boards from cable disturbances (noise and dangerous voltage peaks).

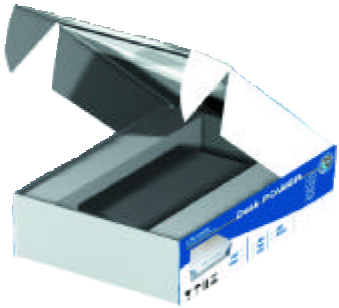
2. Unpacking the Unit & Contents

2.1 Unpacking the unit.

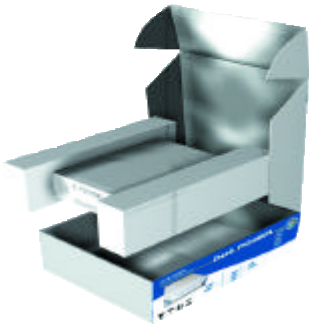
When opening the package, please follow this procedure:

1.- Place the packaging in a horizontal position following the arrow indications shown.

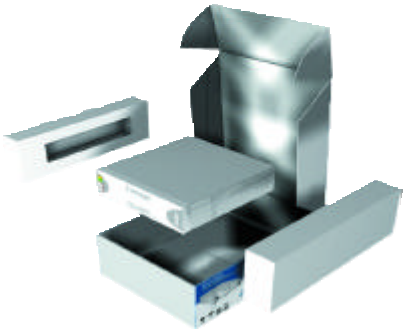
2.- Open the front flap



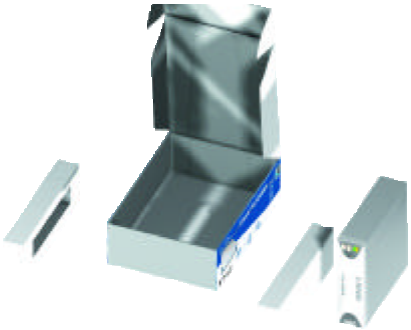
3.- Remove the top cover to the back.



4.- Remove the equipment



5.- Remove the protection



6.- Place the equipment in a working position

Note: All the material in the packaging has been made with recyclable materials.
Please Keep the packaging for future transportation.

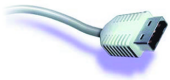
2.2 Package contents

The contents of a DESK POWER package are described below. Please ensure all the items have been correctly received. It any of them have been damaged, please contact your supplier.
Once opened, please verify the following items included in the box. These are:

- UPS unit:

- 2 power cables with IEC 320 or NEMA 5-15 plug for UPS outlet:

- Communication cable:



- Registration and software download ticket:

- User manual:

3 Installation

Please read the following information before installing the UPS.

- When installing the UPS, please consider the heavy weight of some components. Preferably, they should be installed in the lower section of the cubicle. UPS systems consisting of several components must be installed so that the battery packs are mounted in the lower section.

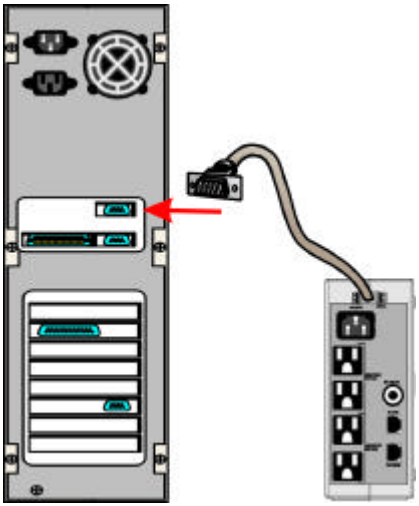
- Do not protect laser printers with the Battery Protected outlets because of the exceptionally high power requirements of the heating elements.

To correctly install the unit, please follow the procedure described below:

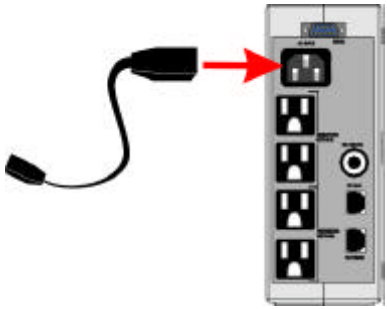
1.Connect the load (i.e. PC CPU, Monitor) to the UPS Battery Protected outlets. Appropriate loads are those units that will require extend run time during blackouts.

2. Connect the selected load (i.e. printer, scanner) to the surge protected outlet. Appropriate loads are those elements that demand surge protection, but that do not require extended runtime during power outages.

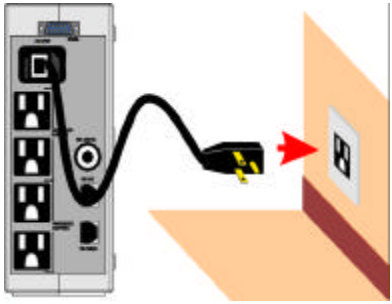
3. If the UPS will provide communication to a computing system, connect the comms cable to the UPS comm port and to the PC serial port



4. Plug the power cable to the AC inlet.



5. Plug the power cable to the mains supply



6. Press the On / Off button on the front panel to start up the UPS.

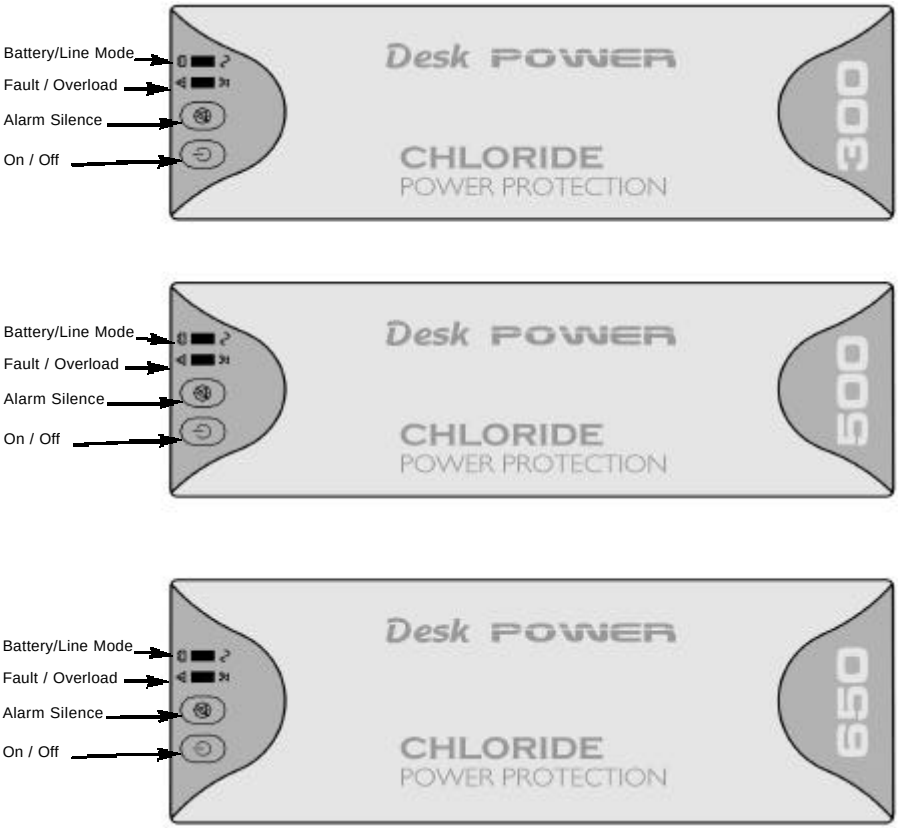
7. If you have a Shutdown Software license, install the bundled software. To do this, please follow the procedure enclosed with the software license.

4. Unit elements.

4.1 Front Panel

4.1.1 Elements

Described below are the relevant elements located in the front panel.



On/Off Button : Turns On/Off the unit.

Alarm Silence button : Silences the acoustic signals. This status will remain until either the Off/On button is pressed or the Alarm Silence is pressed again.

Battery/Line Mode indicator: Shows the working status (Green-steady on mains, Green-blinking on battery)

Fault/Overload indicator : Indicates a battery failure or an overload condition

4.1.2. Functionality

The combination of the LED's and the acoustic signal determines the operation status of the unit. These conditions are summarised in the following table:

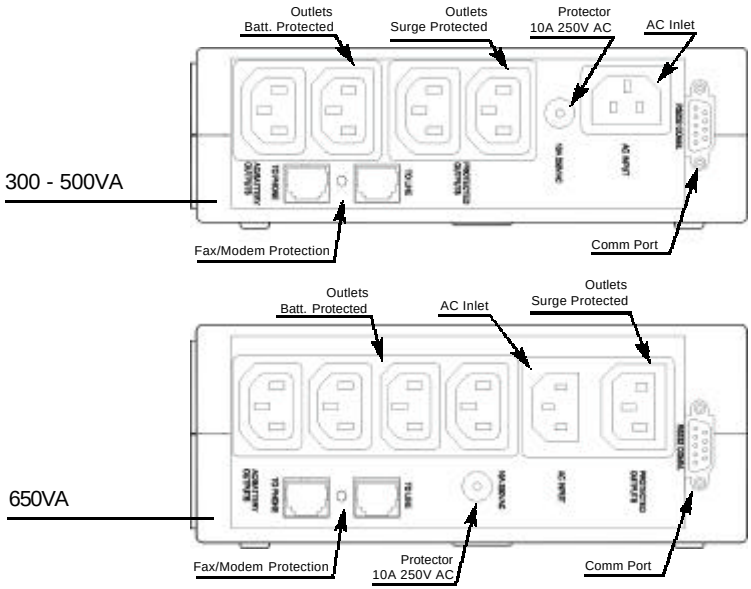
Operation mode	LED	Buzzer
Line mode	Green LED steady	Silence
Battery mode with normal battery voltage	Green LED blinking 1/5 sec	Beeping 1/5 sec
Battery mode with low battery voltage	Green LED blinking 2/5 sec	Beeping 2/5 sec
Overload	Red LED blinking 1/0.5 sec	Beeping blinking 1/0.5 sec.
Battery failure/Battery overcharge	Red LED blinking 2/2 sec.	Beeping 2/2 sec
Fault	Red LED steady	Beeping steady

4.2. Rear Panel

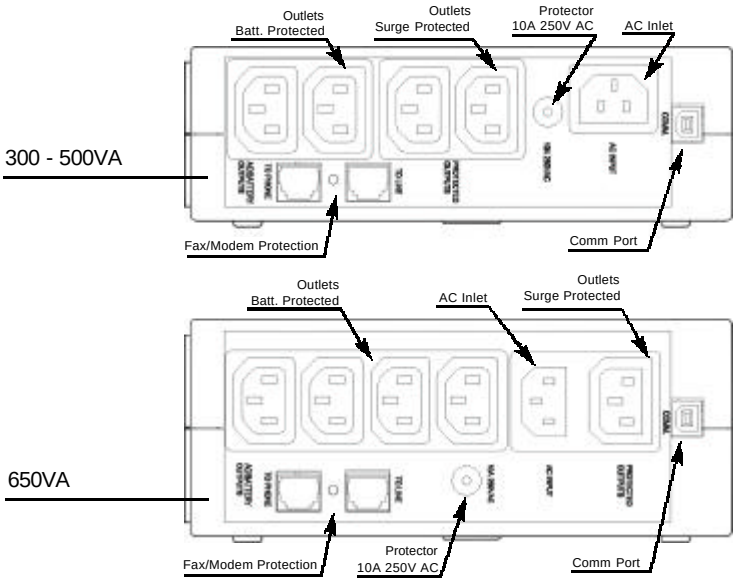
Depicted below, are all the elements located on the rear panel. Depending on the power, the voltage and the type of communications port, the sets are as follows:

4.2.1. 230V Version.

4.2.1.1. RS232

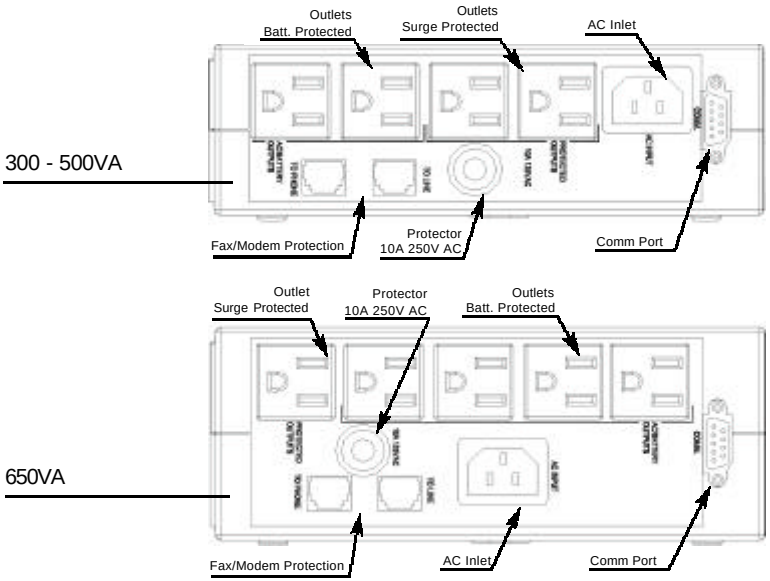


4.2.1.2. USB

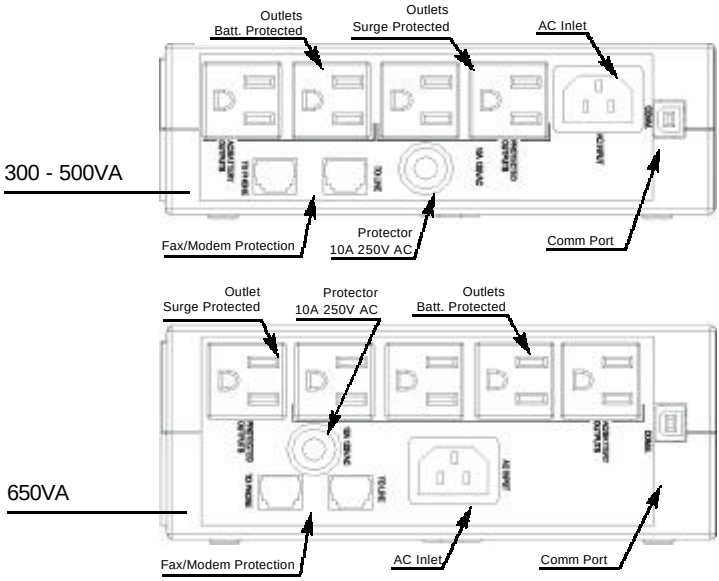


4.2.2. 120V Version

4.2.1.1. RS232



4.2.2.2. USB



AC Inlet : Connection to mains

Protector : 10A input protection

Surge protected outlets : To protect devices that do not require additional back-up time but only a clean and stable supply. (eg: Printers, scanners, etc.). On Mains presence, the energy supplied by the outlets is filtered. In case of mains failure no energy will be present at these outlets.

Batt. Protected outlets : To protect loads with additional battery back-up time. These outlets provide surge protection too.

10A/250VAC Protector : In order to protect the unit from short-circuits and overcharges, an input circuit breaker is present at the input of the equipment.

Comm. Port : A communication port RS 232 or USB on the equipment allows computers to communicate with the UPS by using MopUPS Express software. (See -Registration and software download card).MopUPS Professional is available for more advanced applications .

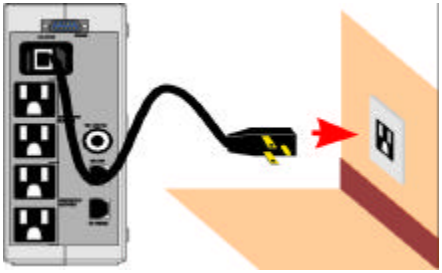
Fax/Modem/LAN Protection : Data line connections (Fax / Modem / LAN connections). Special line filtered connections that provide protection to network or line communications. This feature cleans electrical noises out of the transmission, enhancing thus the connection speed.

CAUTION: When the load is connected to the surge protected output on the rear panel, the energy is taken directly from the mains therefore the loads will not have battery back-up if there is a mains failure.

5. Battery Test

As soon as the UPS is connected to the mains, the battery will be charged independently whether UPS is switched on or not.

To verify the battery has been properly loaded, please follow the procedure described below:



1. Connect the UPS to the mains. The action of the main relay will be heard at the same time of the UPS' start. In normal operation, this step is already done.

2. Charge the battery for 8 hours.

3. Switch on the UPS.

4. The buzzer will beep continuously and both the red LED and the green LED will light up for 2 seconds.

5. If the battery is fully charged, the UPS will work in battery mode for 3 seconds. The red LED will be off. The behaviour of the green LED and the buzzer are in accordance with the battery mode with normal voltage.

6. If the battery is not fully loaded, the UPS will transfer to line mode immediately. No warning display is announced. Battery must then be verified by pressing the alarm silence button for more than 2 seconds in line mode.

6. Interfaces

To prevent damage to the equipment and load connected, use only factory-supplied comms cables or cable built according to factory specifications. A standard serial cable may damage the equipment.

The Chloride DESK POWER series has two types of standard interface. These combine protocol data transfer through a sequential RS232 interface or USB interface with signal exchange through a contact interface (UPS interface).

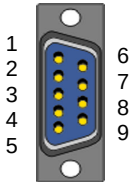
These interfaces can be used for:

1. Direct communication between the UPS and a computer.
2. Transfer of operational states to external systems.

The following table explains the connector Pin-out USB:

Pin Number	Signal
Pin1	VDD
Pin2	USBDM
Pin3	USBDP
Pin4	VSS

The following diagram explains the corresponding function of every pin of RS232:



Pin Number	Signal
Pin2	Tx (RS232C UPS side)
Pin3	Rx (RS232C UPS side)
Pin5	Common
Pin7	PNP function
Pin1, Pin4, Pin6, Pin8, Pin9	Not used

7. Maintenance

This UPS does not require any maintenance by the user.

The typical lifetime of a battery is 4 years at a room temperature of 25 °C.
Regularly check the unit's residual capacity time to ensure that it is sufficient, at least once every 12 months.

7.1 Battery Replacement

Note:
In the 120V version it is possible to change the battery without switching the unit off or affecting its functioning (Hot Swap). During this process the load will not be protected.

Please read the following information before replacing the battery:

1 - Make sure that the UPS is not working in either battery mode or line mode before replace the battery.

2 - The battery used in the UPS can produce dangerous voltages and high currents. Therefore, the batteries may cause severe injury if their terminals come into contact with any tools or the UPS cabinet. Be very careful to avoid electric shock and burns when replacing batteries.

3 - Disconnect the AC power cord and wait 30 seconds before servicing the battery. Battery circuit is not isolated from AC input, hazardous voltage may exist between battery terminals and ground.

4 - Batteries contain caustic acids and toxic materials and can rupture or leak if mistreated. Remove rings, wristwatches and other jewellery.

5 - Never allow any tool to come into contact with battery terminals and the UPS cabinet. Do not lay tools or metal parts on top of the batteries.

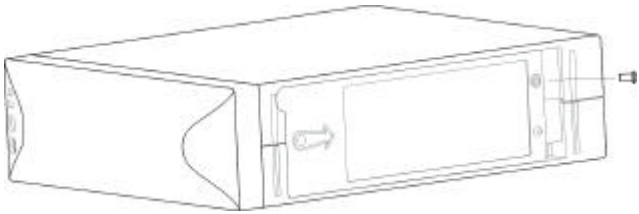
6 - To ensure the continuous superior performance of your UPS and to maintain proper charger operation, you must replace the UPS batteries with the same number and type of batteries. These batteries must be the same type as the original batteries: valve-regulated, low maintenance. The replacement batteries should have the same voltage and ampere-hour rating as the original batteries.

7 - Assuming that the old batteries are fully charged. Use the same precautions you would use when handling a new battery. Do not short battery terminals with a cable or tool! Batteries contain lead. Many areas have regulations about disposing of used batteries. Please dispose of old batteries properly. Do not dispose of batteries in a fire because the batteries could explode. Do not open or mutilate batteries. Released electrolyte is harmful to the skin and eyes. It may be toxic.

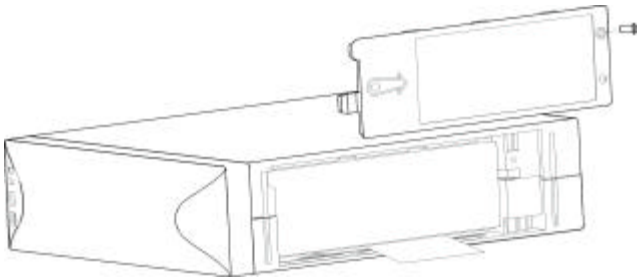
8 -This equipment may produce ozone. Take precautions to ensure that the concentration of ozone is limited to a safe value.

Please replace the battery by following these steps:

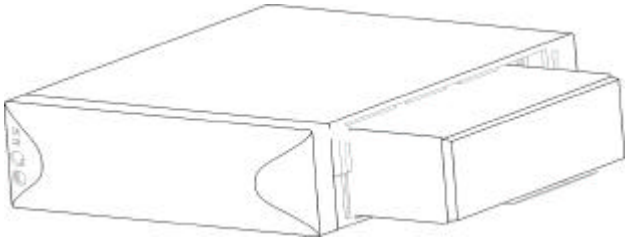
1. Remove the screw on the bottom side of the UPS and slide the door off.



2. Gently pull out the battery by grasping the tab.



3. Disconnect the two wires connecting the battery to the UPS.



4. Connect the battery wires to the new battery; red to positive (+), black to negative (-). Carefully place the new battery into the case.

5. Slide the battery door back into place and secure with the screw removed in step1.

6. Install the UPS according to the procedure described in section 3

7.2 Storage

For long time storage in moderate climates, the batteries should be charged for 8 hours every three months. Repeat every two months in high temperature locations.

1. Connect the UPS to socket outlet with earthing contact or install the types for fixed connection according to section 2.3 of this manual at an appropriate source. No matter stand-by switch is on or off, it could be recharged properly.
2. Switch off if it has been turned on and pull out the mains plug after 8 hours. If necessary, then remove the connections of the UPS in an inverted sequence to what is described in section 3.

7.3 Cleaning

- Before cleaning, you should switch off the UPS and pull the plug out of the socket outlet.
- Do not use scouring powder or plastic-dissolving solution to clean the UPS.
- Do not allow any liquid to get inside the UPS.
- Clean the outside of the UPS housing by wiping with a dry or damp cloth.

8. Troubleshooting

If a problem occurs in despite of the high reliability of the device, please check the following table before calling the service centre.

· Is the UPS plugged into a correctly working outlet ?
· Has the protector tripped on the rear panel?

Problem	Possible Cause	Action to Take
Green LED blinks 1/5sec Red LED off Beeping 1/5 sec	1.Utility power outage 2.Loose plug 3.Tripped circuit breaker	1.Prepare protected equipment for powering down, and wait for power to return. 2.Make sure the power cord is connected. 3.Reset the circuit breaker.
Green LED blinks 2/5sec Red LED off Beeping 2/5 sec	Very low battery voltage	Plug the unit into a working wall outlet for at least 8 hours to allow the batteries to be charged.
Red LED blinks 1/0,5sec Buzzing 1/0.5 sec	Overload	Remove the equipment. Reduce load level until the buzzing stops.
Green LED steady Red LED blinks 2/2sec Beeping 2/2 sec	1. Battery failure 2. Battery is overcharged	1. Replace the battery according to section 7.1 2. Call for service.
Green LED off Red LED steady Beeping steady	1.Output short 2.Input voltage is out of range when unit is turned on 3.UPS fault	1.Turn off or unplug load equipment. 2.Turn unit off until acceptable input voltage is restored. 3.Call for service.

If the problem still exist, please have the following information to hand when you call for service:

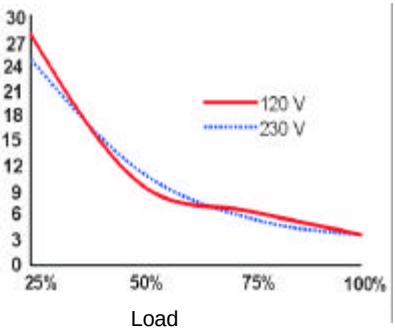
· Information on the unit device (type, order number, serial number from type plate)
· Full description of problem (which load is connected, does the problem occur regularly or sporadically, etc.)

9. Technical Data

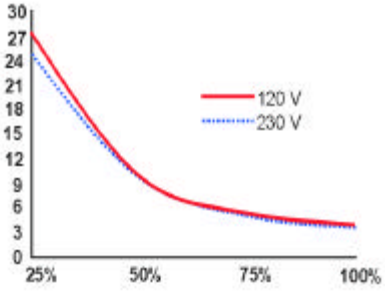
UPS TYPE			Desk Power 300	Desk Power 500	Desk Power 650
Electrical Data					
Rating(VA/W)			300/180	500/300	650/390
Input	Voltage		AC230V / AC120V		
	Voltage range		AC168-280V, absolute maximum rating 290Vrms ver. 230V AC86-146V, absolute maximum rating 150Vrms ver. 120V		
	Frequency		50/60Hz		
	Input protection		10A Circuit Protector		
	Power factor		0.6		
Battery	Integrated type		Panasonic, Lead-Acid, maintenance-free		
	Battery		12V/20W	12V/32W	12V/9Ah
	Emergency supply time Full load/Half load(min)		3/8	3/8	3/8
Output	Voltage		AC230V / AC120V		
	Voltage tolerance	Line mode	Input voltage-Output voltage<1V		
		Batt mode	AC230V±10% / AC120V±10%		
	Frequency	Line mode	Same as input voltage		
		Batt mode	50/60Hz±1Hz		
	Overload Capacity	Line mode	120±10% rated load		
			150±15% rated load		
		Batt mode	120± 10% rated load		
			150± 15% rated load		
Common Data					
Electrical safety			CE listed ver. 230V / UL 1778 ver. 120V		
Radio interference level			CISPR 22, CLASS B / FCC Class B		
Interference immunity			IEC1000-4-2/3/4/5, LEVEL 3		
Efficiency	Line mode		>95%		
	Batt mode		>70%		
Permissible ambient temperature for service			0°C-40°C		
Permissible ambient temperature for storage			-15°C-50°C		
Permissible relative humidity for service			0-95%		
Mechanical Data					
UPS	Weight(kg)		2.5	3.2	3.9
	Dimensions (mm)	Width	60	60	75
		Height	190	190	190
		Depth	230	230	230
Packaging	Weight(kg)		3.0	3.7	4.4
	Dimensions (mm)	Width	140	140	140
		Height	275	275	275
		Depth	370	370	370
Indications			LED-indication at the front side, acoustical alarm		
Connections					
Input			IEC320-C14		
Outlet (UPS protection)		AC230V	IEC320-C13*2		IEC320-C13*4
		AC120V	NEMA 5-15R*2		NEMA 5-15R*4
Outlet (Surge protection)		AC230V	IEC320-C13*2		IEC320-C13*1
		AC120V	NEMA 5-15R*2		NEMA 5-15R*1
Line filter			YES		
Interface COM			SUB-D plug 9-pole pin contacts or USB		
Battery replacement			YES		

10. Battery Backup Times

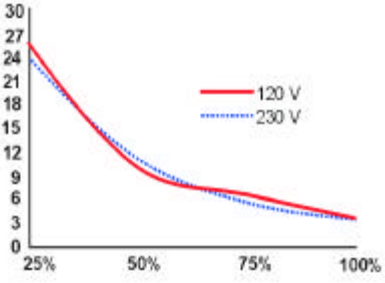
Desk Power 300:



Desk Power 500:



Desk Power 650:



11. Registration form.

Please fill out this form as completely as possible. None of the fields are required but the information you provide will help us make our service better suited to your needs. The information you enter below will never be used outside of CHLORIDE POWER PROTECTION.

Customer Information

First Name : .....

Last Name : .....

Title : .....

Company : .....

Address : .....

City : .....

State/Province : .....

Zip Code : .....

Country of purchase: .....

Phone : .....

Fax : .....

Email : .....

Product information

Model : .....

Serial number : .....

Date of purchase : .....

Purchased form : .....

For use in:

- ☐ Home
- ☐ Small Office
- ☐ Corporate Office

For use with:

- ☐ Desktop PC
- ☐ PC on LAN
- ☐ PC on WAN
- ☐ Server
- ☐ Printer
- ☐ Scanner
- ☐ Hub, Bridge, Router
- ☐ CAD Workstation
- ☐ Telecom
- ☐ Medical equipment
- ☐ Security system
- ☐ Process

Other: .....

Comments, remarks, suggestions...

.....

Thank you for registering your product!
Note: Please fill in this form and submit to Chloride Office.

CHLORIDE WORLD HEADQUARTERS
Chloride Power Protection
George Curl Way
Southampton
Hampshire, SO18 2RY
United Kingdom
Telephone: +44 (0) 23 8061 0311
Facsimile: +44 (0) 23 8061 0852
international.sales@chloridepower.com

AUSTRALIA
Chloride Hytek PTY LTD
Units C1A and C1B
Centrecourt Business Park
25-27 Paul Street North
North Ryde NSW 2113
Australia
Telephone: +61 2 9888 1266
Facsimile: +61 2 9888 1966
australia.sales@chloridepower.com

FRANCE
Chloride Industrial Systems
30 Avenue Montgolfier - BP 90
F-69684 Chassieu Cedex
France
Telephone: +33 4 7840 1356
Facsimile: +33 4 7890 5890
industrial.sales@chloridepower.com

Chloride Power Protection
1 rue Felix Potin
ZA Les Belles Vues
91290 Arpajon
France
Telephone: +33 1 6926 1281
Facsimile: +33 1 6083 1816
france.sales@chloridepower.com

Chloride Telecom Systems
ZA Les Rolandières
35120 Dol de Bretagne
France
Telephone: + 33 299 48 2068
Facsimile: + 33 299 48 3394
com-ce@saed.com

GERMANY
Masterguard
Schallershofer Str. 141
D-91056 Erlangen
Germany
Telephone: +49 9131 9855 100
Facsimile: +49 9131 9855 270
info@masterguard.de

ITALY
Chloride Silectron
Via Fornace 30
40023 Castel Guelfo
Bologna
Italy
Telephone: +39 054 2632 111
Facsimile: +39 054 2632 120
italy.sales@chloridepower.com

PORTUGAL
Chloride Power Protection
Rua dos Tercos 574
Zona Industrial de Canelas
4405 270 Canelas VNG. Oporto
Portugal
Telephone: +351 22 7151 210
Facsimile: + 351 22 7126 337
portugal.sales@chloridepower.com

SPAIN
Chloride Boar
Azufre 8-10
Polígono Industrial Sur
28770 Colmenar Viejo, Madrid
Spain
Telephone : +34 91 848 84 00
Facsimile : +34 91 845 51 32
spain.sales@chloridepower.com

THAILAND
Chloride Power Electronics LTD
Panjathani Tower, 20th Floor
127/25 Nonsee Road
Chongnonsee, Yannawa
Bangkok 10120
Thailand
Telephone: + 662 6810 100
Facsimile: + 662 6810 109
thailand.sales@chloridepower.com
Sebnem Sok. Nº 14, Kat: 3-4-7-8
81110 Bostanci Istambul

TURKEY
Masterguard
Sebnem Sok. Nº 14, Kat: 3-4-7-8
81110 Bostanci Istambul
Turkey
Telephone: +90 216 464 47 00
Facsimile: +90 216 464 47 15
masterguard@masterguard.com.tr

UK
Chloride Power Protection
George Curl Way
Southampton
Hampshire, SO18 2RY
United Kingdom
Telephone: +44 (0) 23 8061 0311
Facsimile: +44 (0) 23 8061 0852
.sales@chloridepower.com

Oneac UK
18 & 20 Blacklands Way
Abingdon Business Park
Abingdon
Oxfordshire, OX14 1DY
United Kingdom
Telephone: +44 (0) 1235 534 721
Facsimile: + 44 (0) 1235 534 197
oneac_ltd@oneac.com

USA
Chloride Power Protection
28430 N. Ballard
Lake Forest IL 60045
USA
Telephone: +1 800 239 2257
Facsimile: +1 800 833 6829

Oneac Corporation
27944 North Bradley Road
Libertyville
Illinois 60048-9700
USA
Telephone: +1 847 816 6000
Facsimile: +1 847 680 5124
info@oneac.com

INTERNATIONAL SALES
Europe, Middle East and Africa
Chloride Power Protection
George Curl Way
Southampton
Hampshire, SO18 2RY
United Kingdom
Telephone: +44 (0) 23 8061 0311
Facsimile: +44 (0) 23 8061 0852
international.sales@chloridepower.com

Chloride Industrial Middle-East (CIME)
PO Box 17693
Dubai
United Arab Emirates
Telephone: +971 (4) 881 8848
Facsimile:+971 (4) 881 4518

Latin America
Chloride Power Protection Latin America
Rua Arizona 1349
Brooklin Novo
Sao Paulo CEP 04567-002
Brazil
Telephone: +55 11 5505 4661
Facsimile: +55 11 5505 4832
latinamerica.sales@chloridepower.com

Asia Pacific
Chloride Power Protection
80 Marine Parade Road
#10-08 Parkway Parade
449269
Singapore
Telephone: +65 348 5288
Facsimile: +65 348 3400
asiaups@chloridepower.com

Distributed by
POWERCOM
800-288-9807